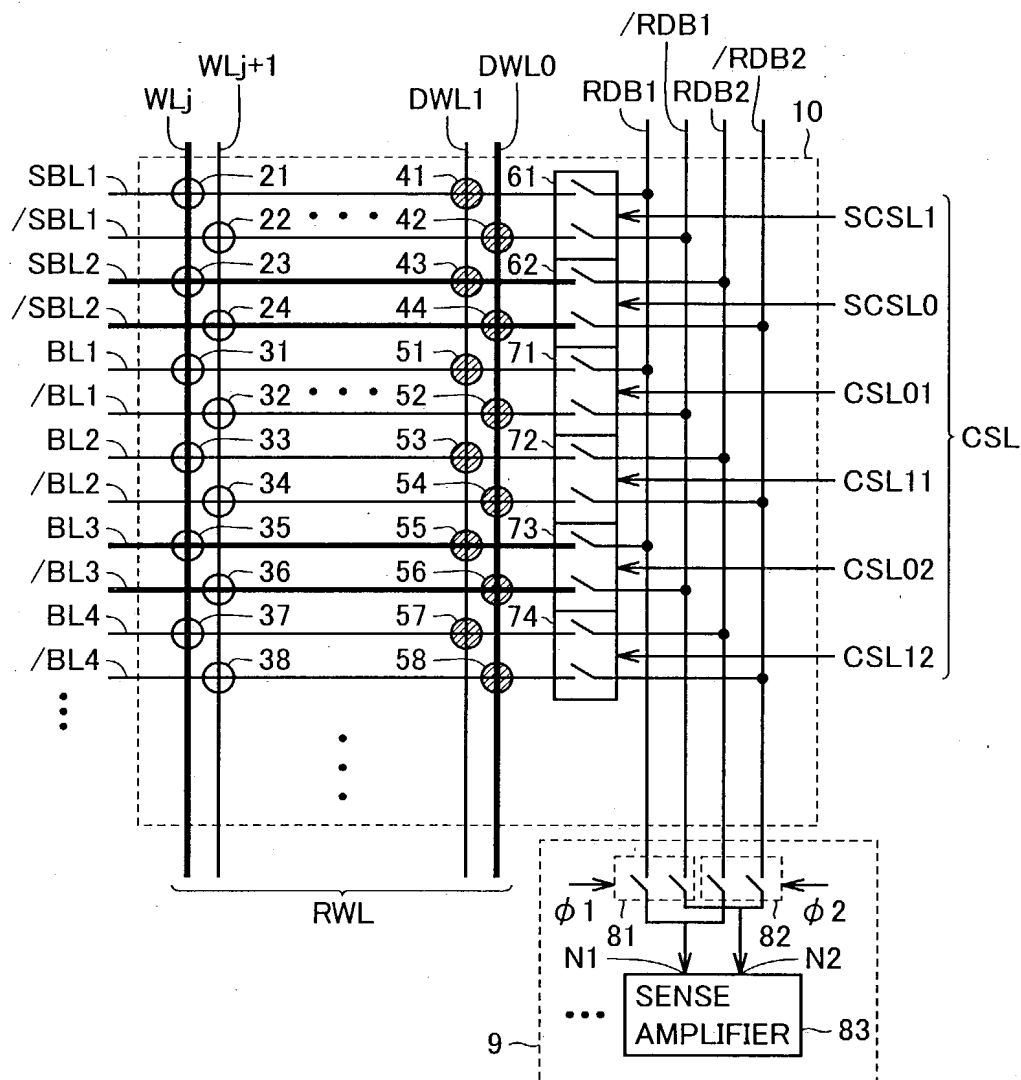


FIG.2



[illegible][illegible]

FIG. 7

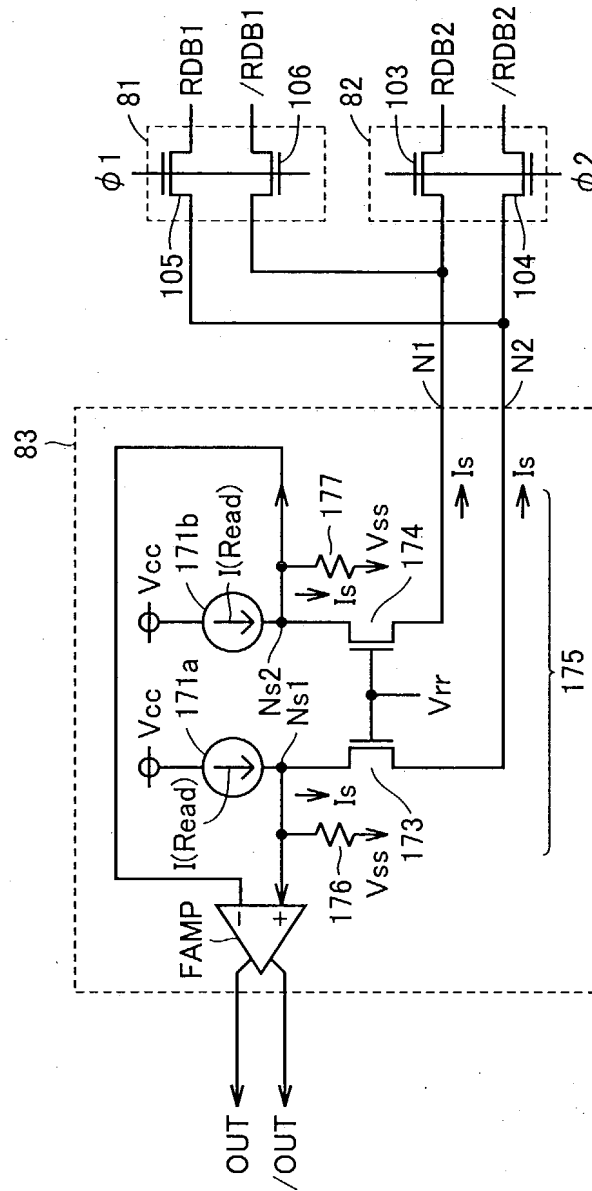


FIG.8

SELECTED COLUMN	USED DATA BUS	SELECTED SPARE COLUMN	USED DATA BUS	SPARE/NORMAL
CSL01 CSL02	RDB1, /RDB1	SCSL0	RDB2, /RDB2	ϕ 1:NORMAL SELECTION ϕ 2:SPARE SELECTION
CSL11 CSL12	RDB2, /RDB2	SCSL1	RDB1, /RDB1	ϕ 1:SPARE SELECTION ϕ 2:NORMAL SELECTION

FIG.9

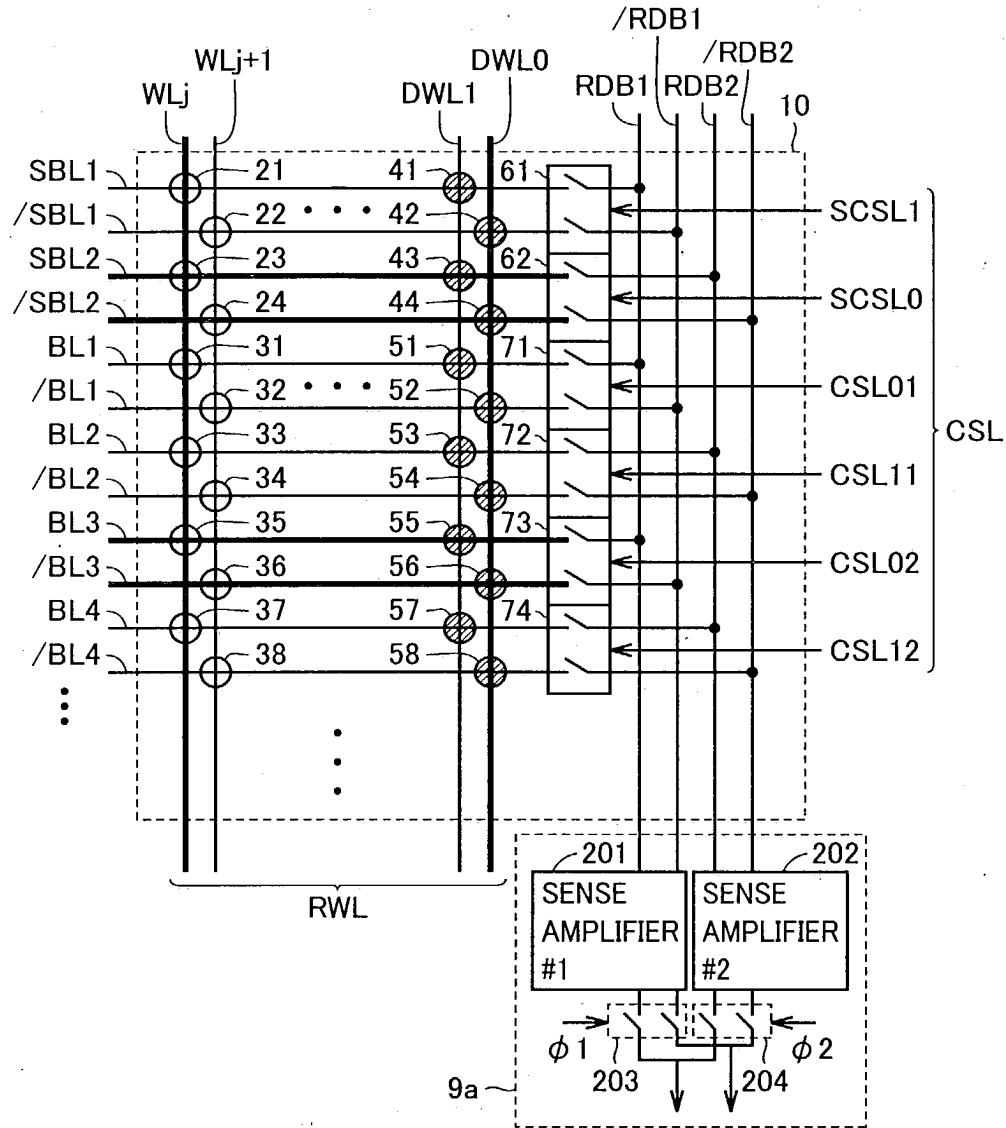


FIG.10

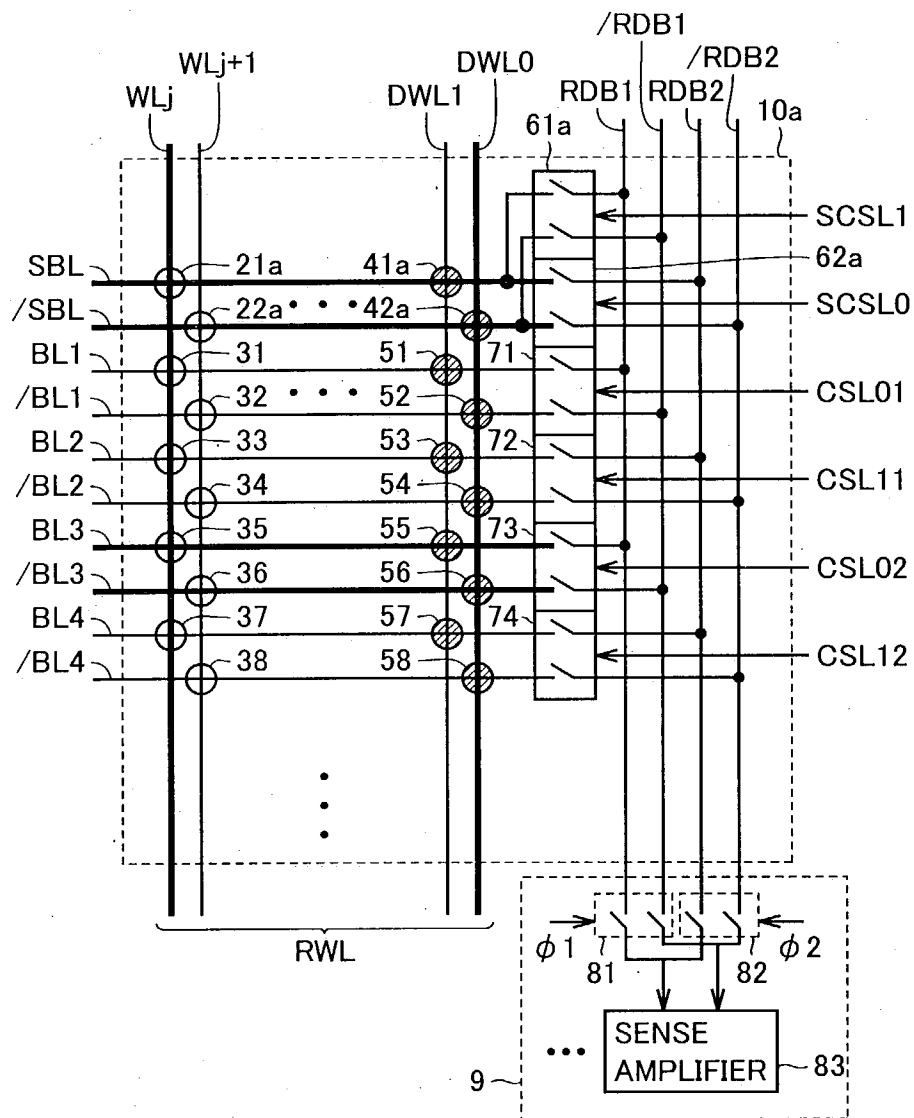


FIG.11

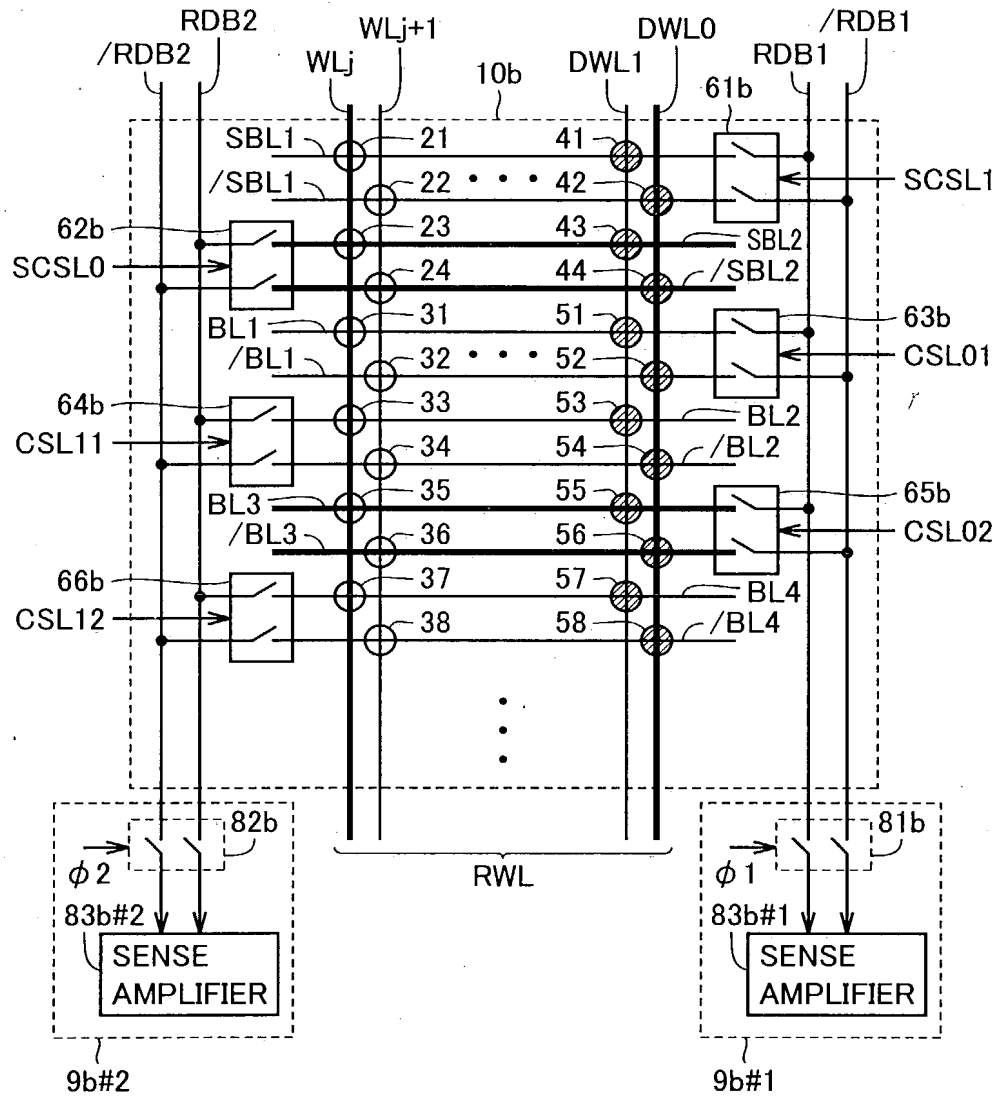


FIG.12

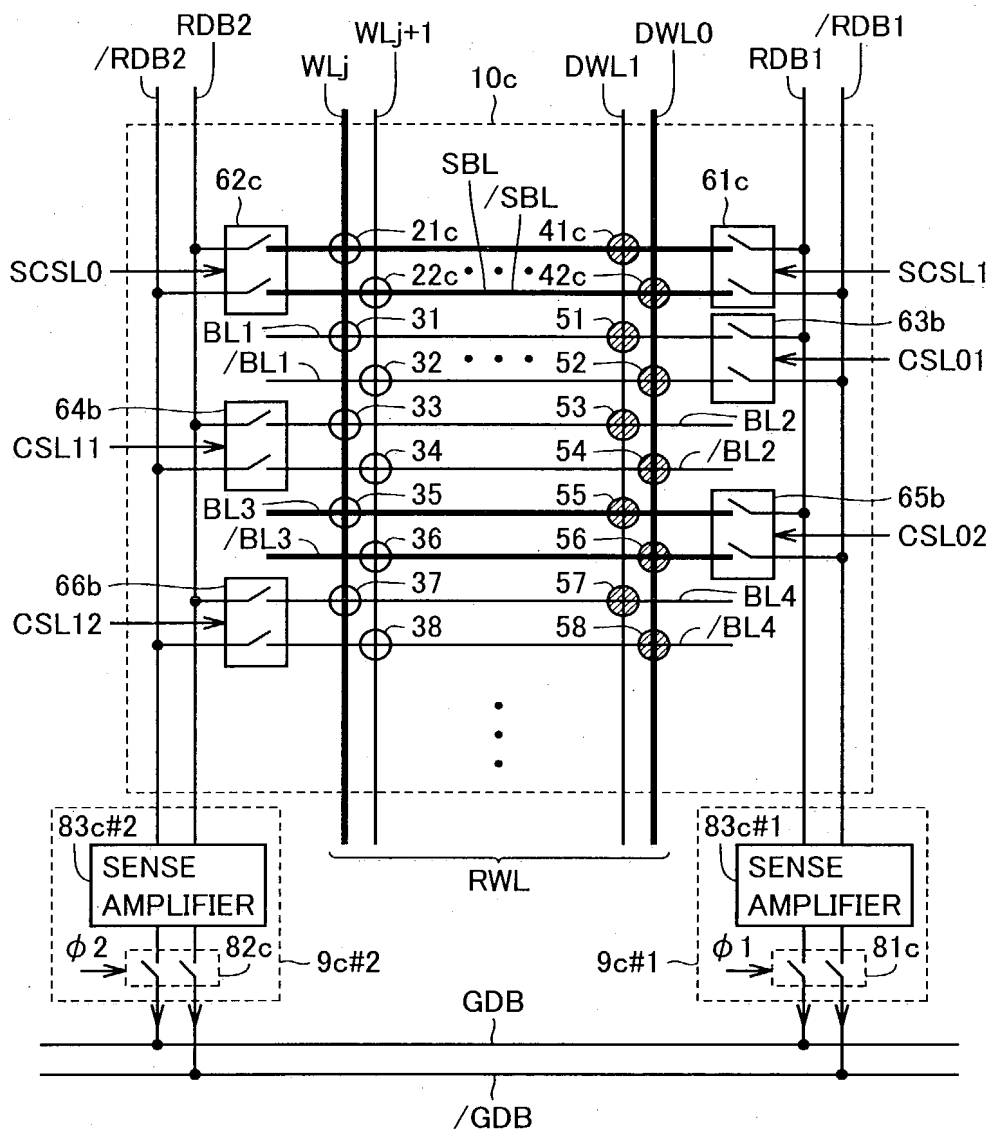


FIG.14

SELECTED COLUMN	USED DATA BUS	SELECTED SPARE COLUMN	USED DATA BUS	SPARE/NORMAL
CSL1	RDB1./RDB1 RDB2./RDB2	SCSL1	RDB3./RDB3	$\phi 1 + \phi 2$: NORMAL SELECTION $\phi 3 + \phi 2$: SPARE SELECTION
CSL2	RDB3./RDB3 RDB4./RDB4	SCSL2	RDB1./RDB1	$\phi 3 + \phi 4$: NORMAL SELECTION $\phi 1 + \phi 4$: SPARE SELECTION

FIG.15

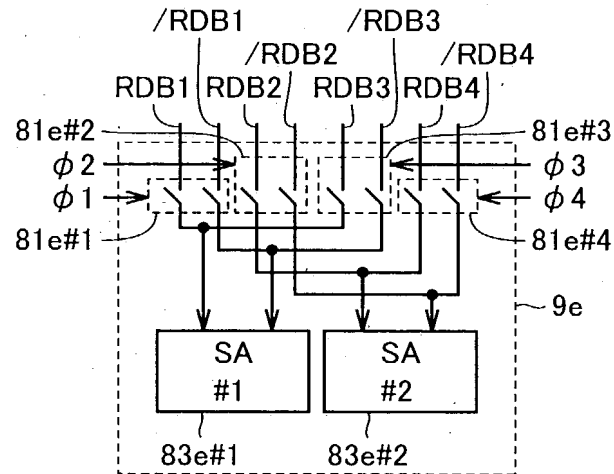


FIG.16

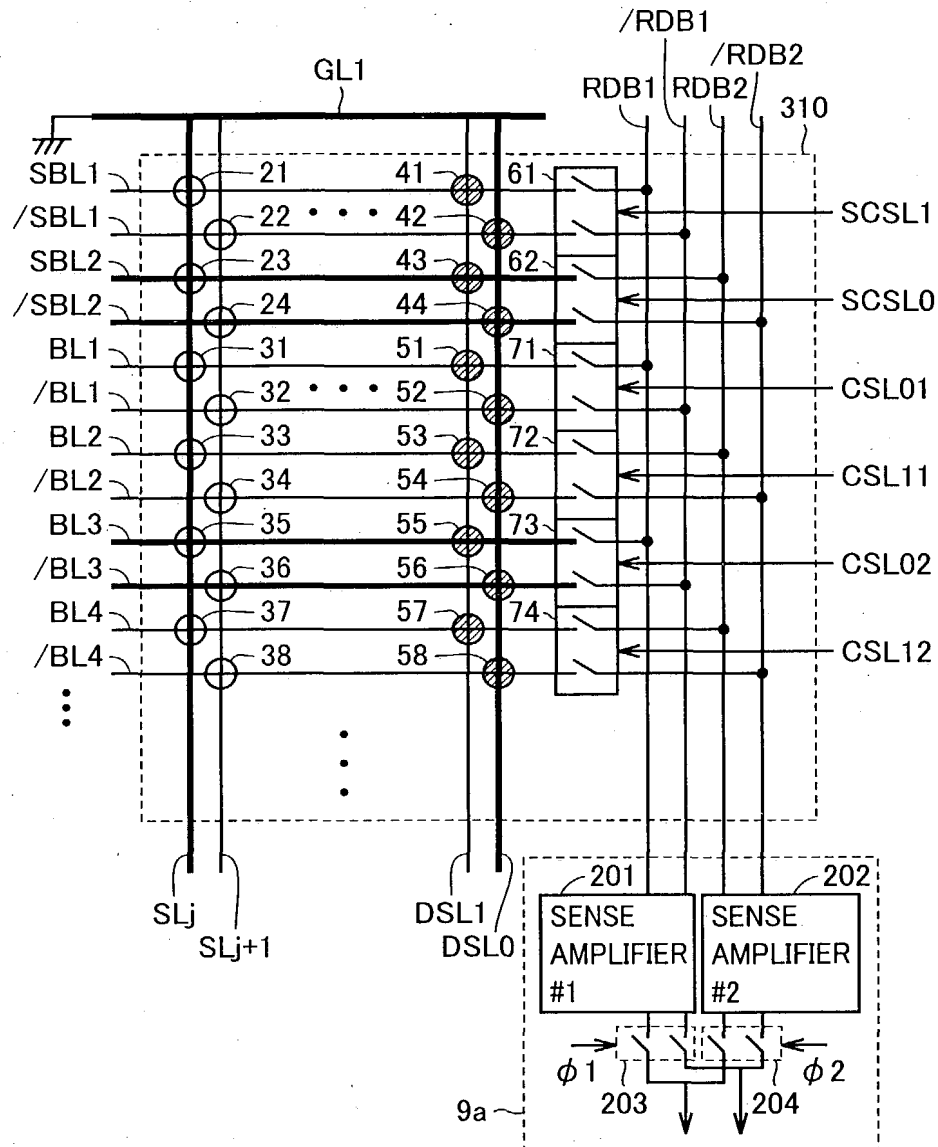


FIG.17

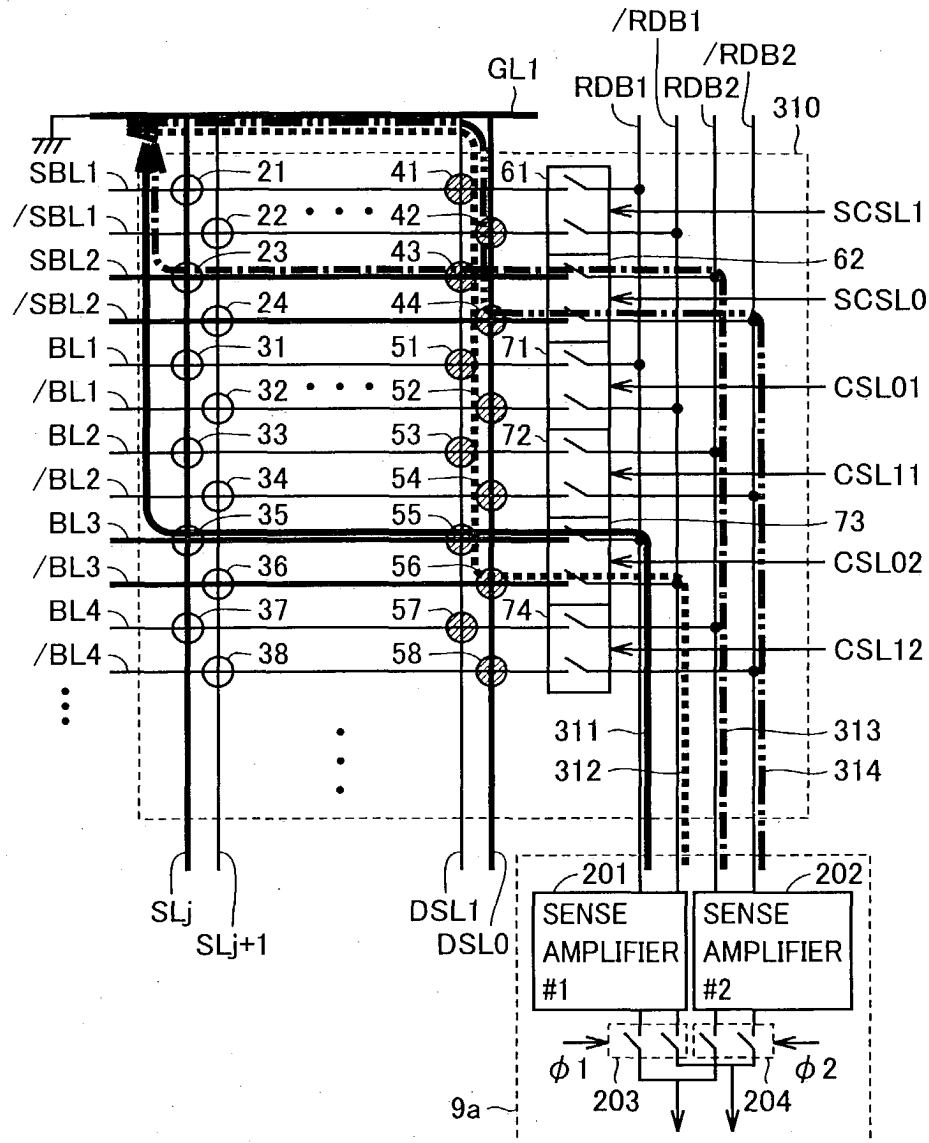


FIG.18

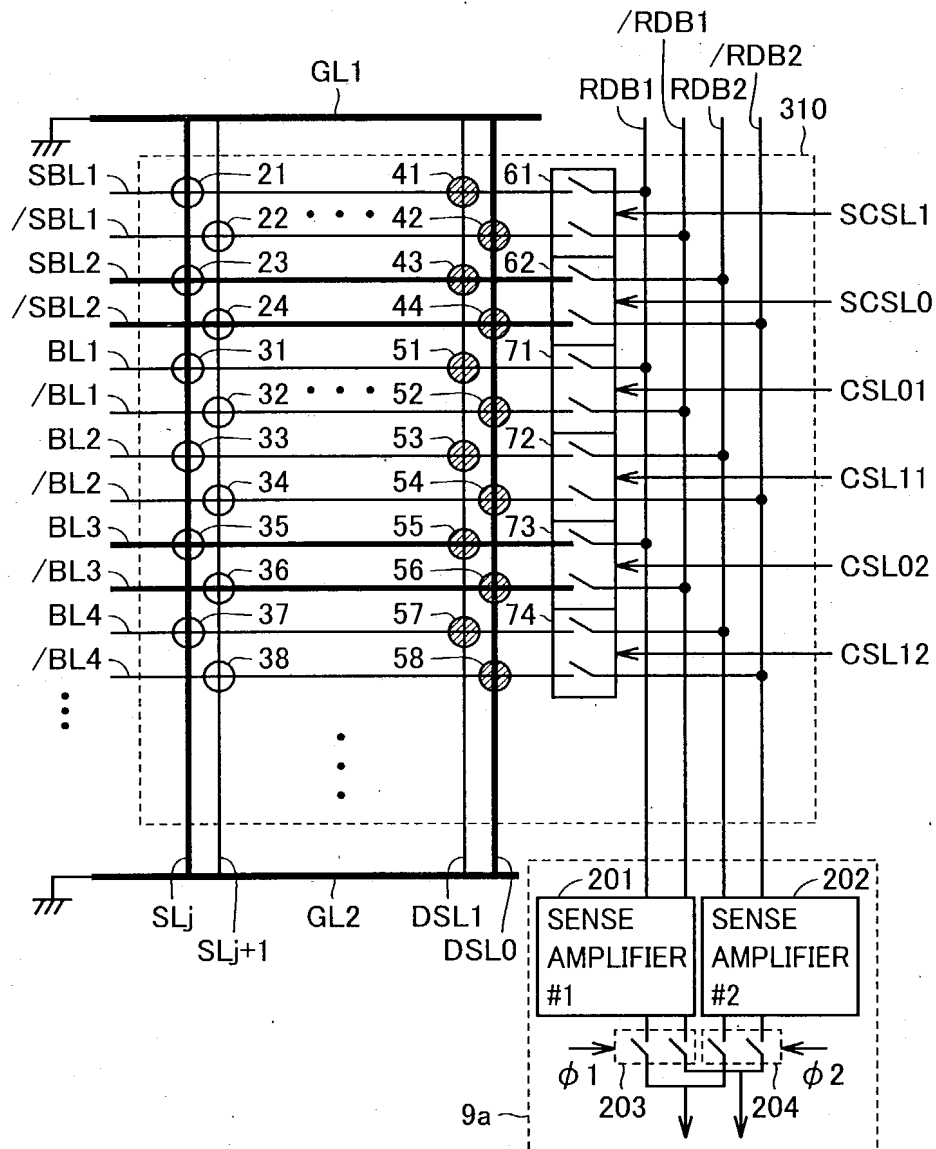


FIG.19

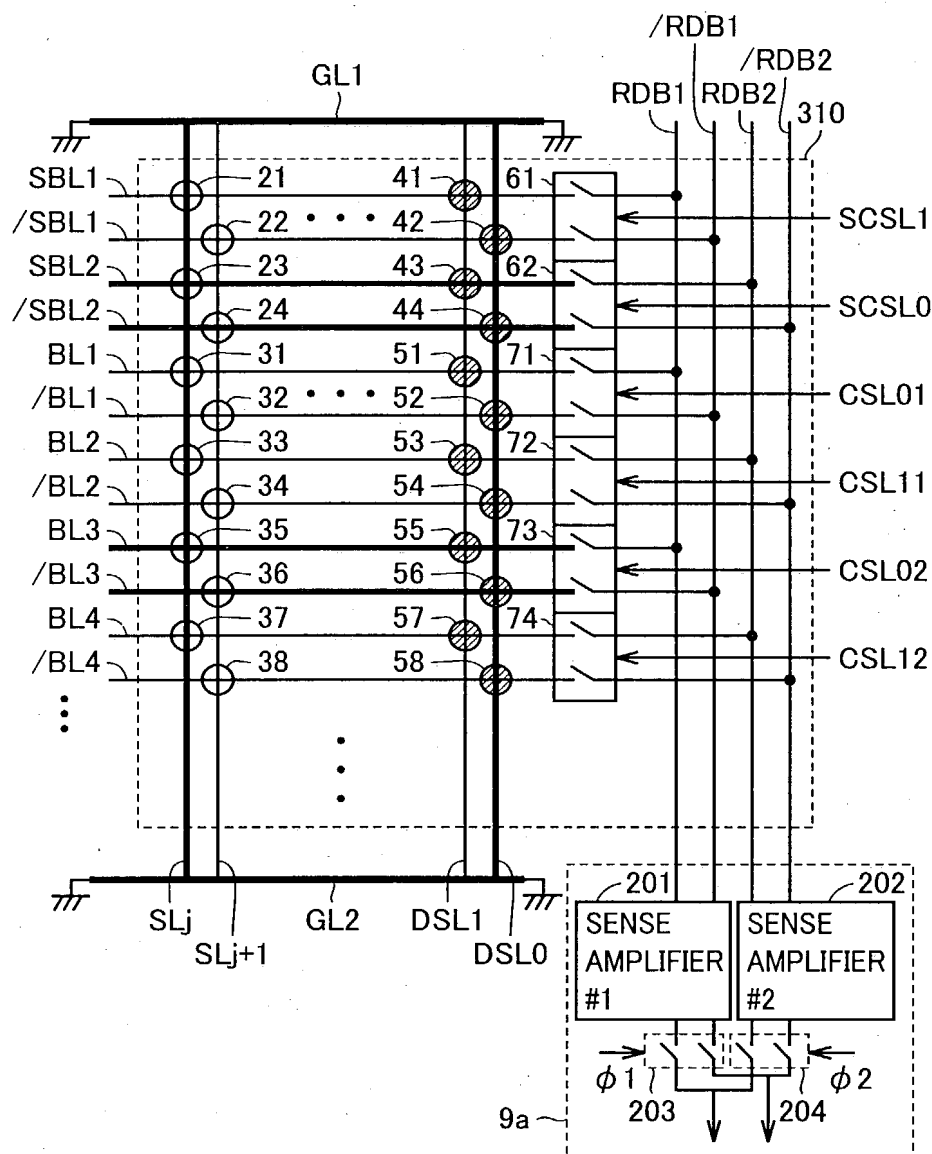


FIG.20

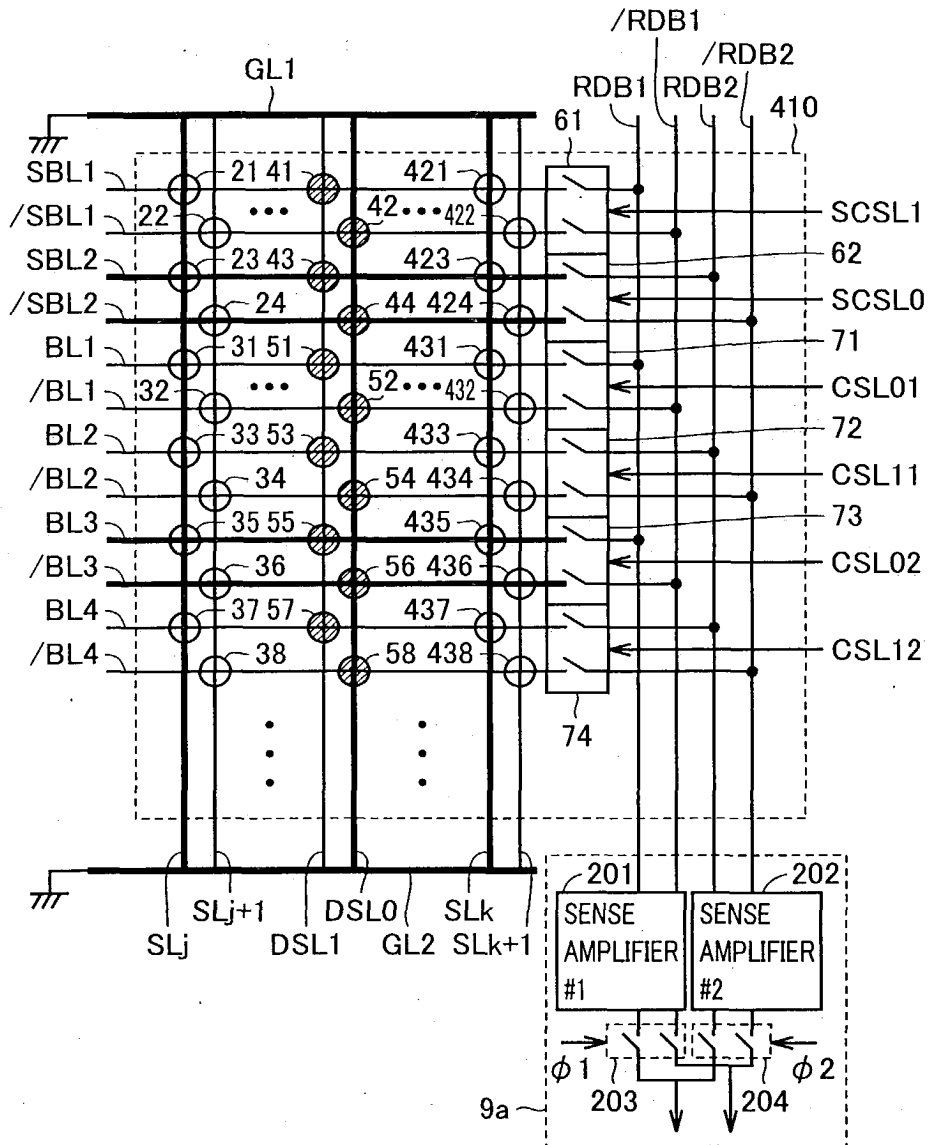


FIG.21

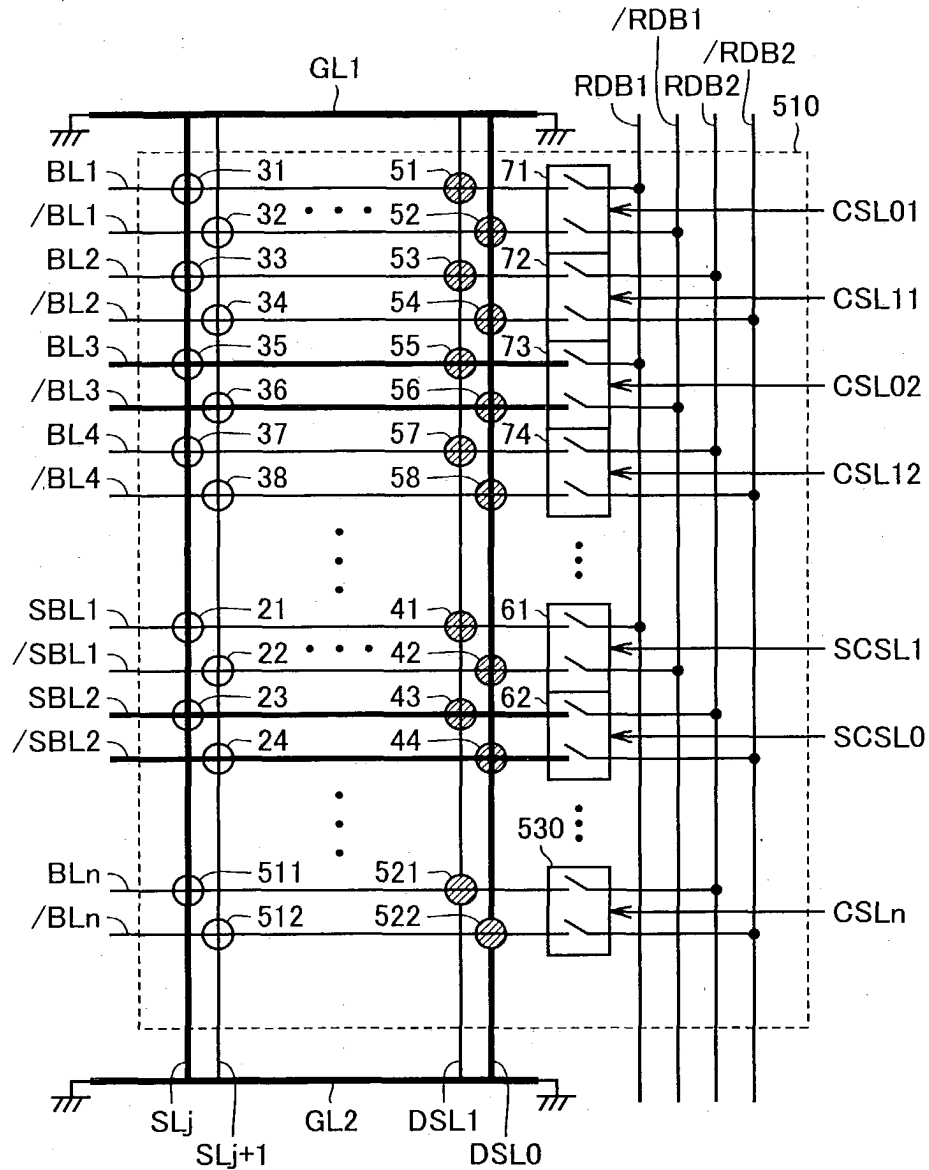
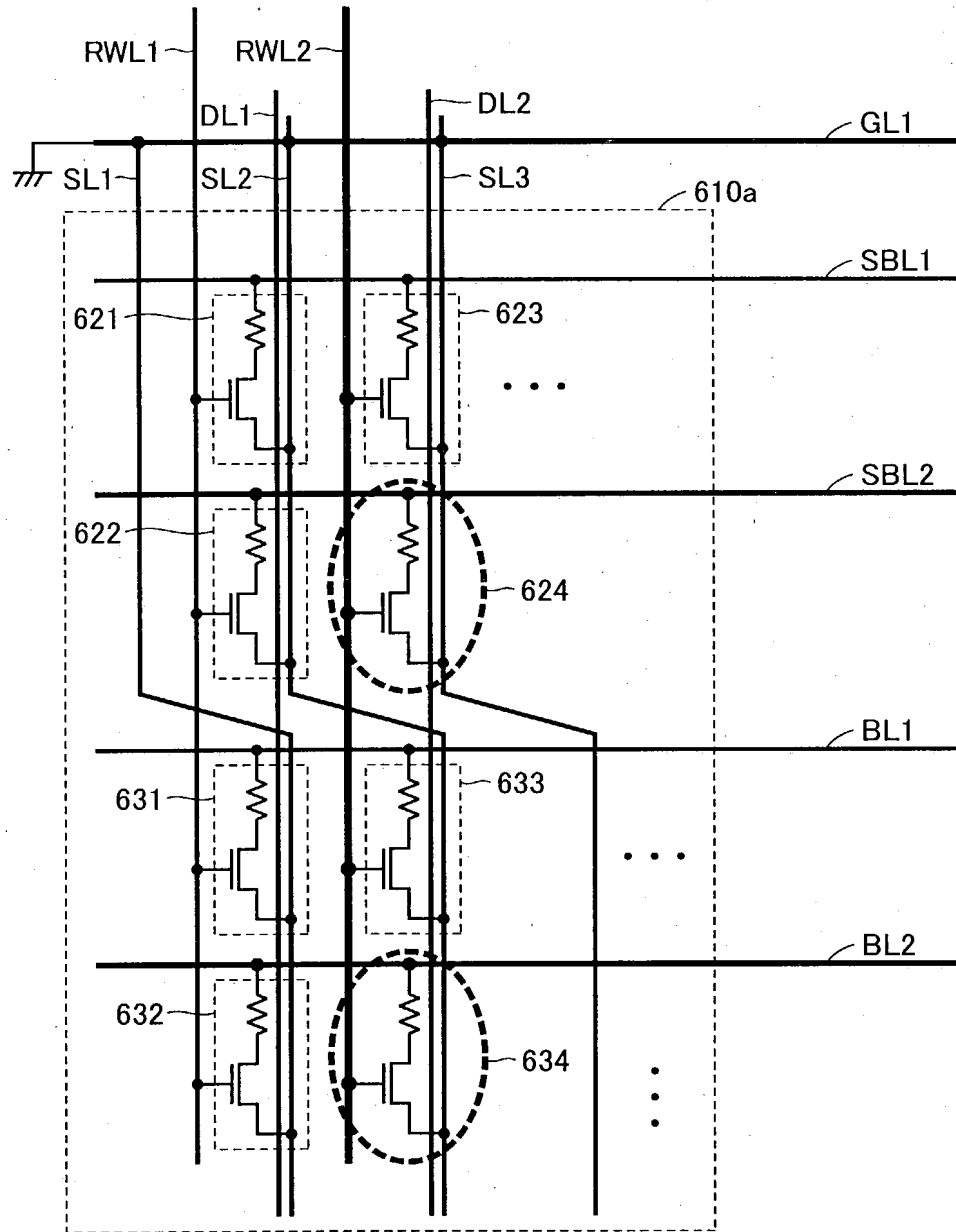


FIG.23



The diagram illustrates a semiconductor device layout with a grid of horizontal and vertical lines. The horizontal lines are labeled RWL1, RWL2, DL1, DL2, GL1, SBL1, SBL2, BL1, and BL2. The vertical lines are labeled SL1 and SL2. A dashed box 610b encloses a central portion of the circuit. Within this box, there are several components: resistors (621, 622, 623, 624, 631, 632, 633, 634) and transistors (610a, 610b). The components are connected to the grid lines in a specific pattern, with some components being highlighted by dashed boxes or circles. For example, component 624 is circled with a dashed line, and component 632 is also circled with a dashed line. The diagram shows a complex interconnection of these components, likely representing a memory array or a similar semiconductor structure.

The diagram illustrates a semiconductor device circuit with a grid of word lines (DL1, DL2) and bit lines (SL1a, SL1b, SL2a, SL2b). The circuit includes sense amplifiers (621, 622, 623, 624, 631, 632, 633, 634) and data lines (RWL1, RWL2). A dashed box 610c encloses a portion of the circuit, and a dashed oval 624 encloses a specific sense amplifier. The diagram is labeled with various components and their connections.

FIG.26

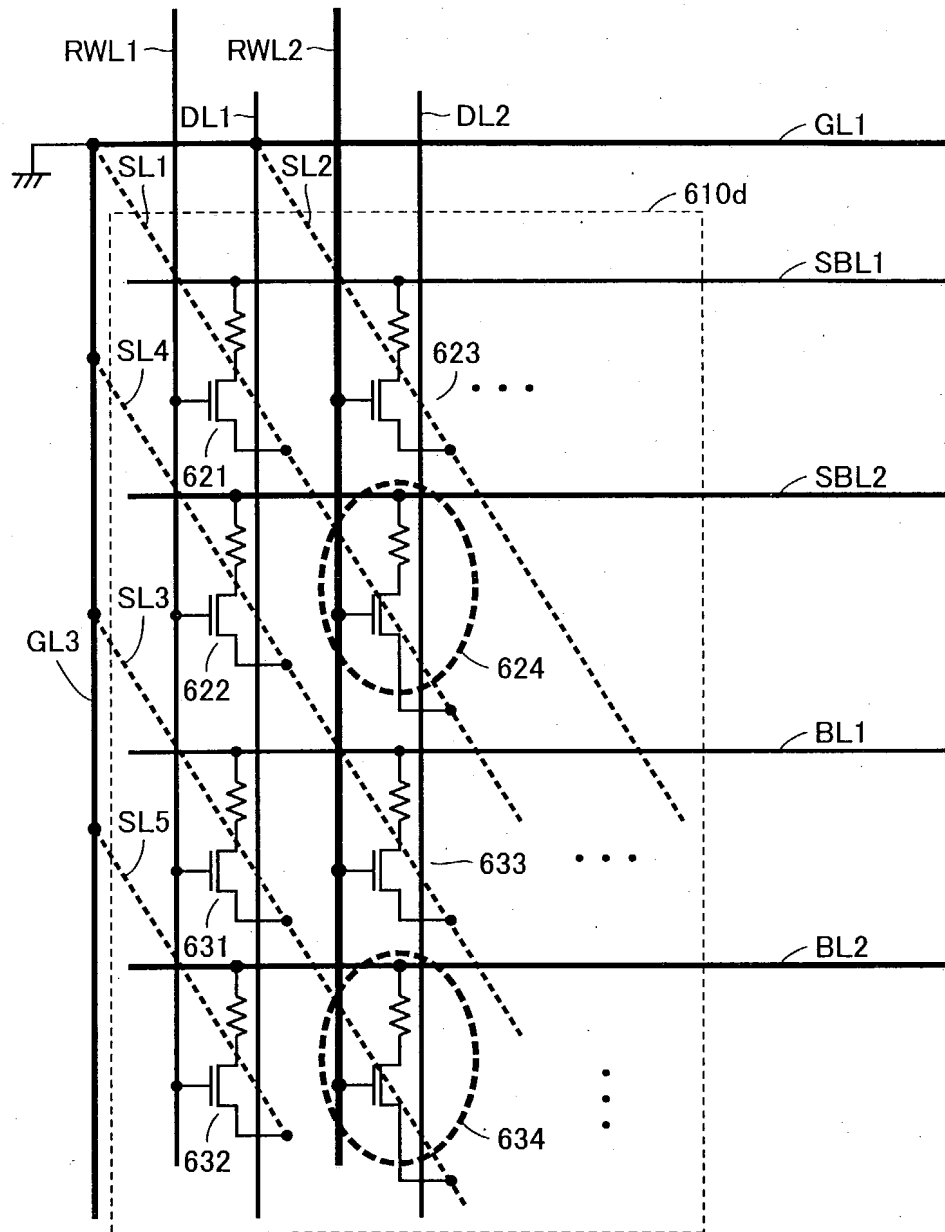


FIG.27

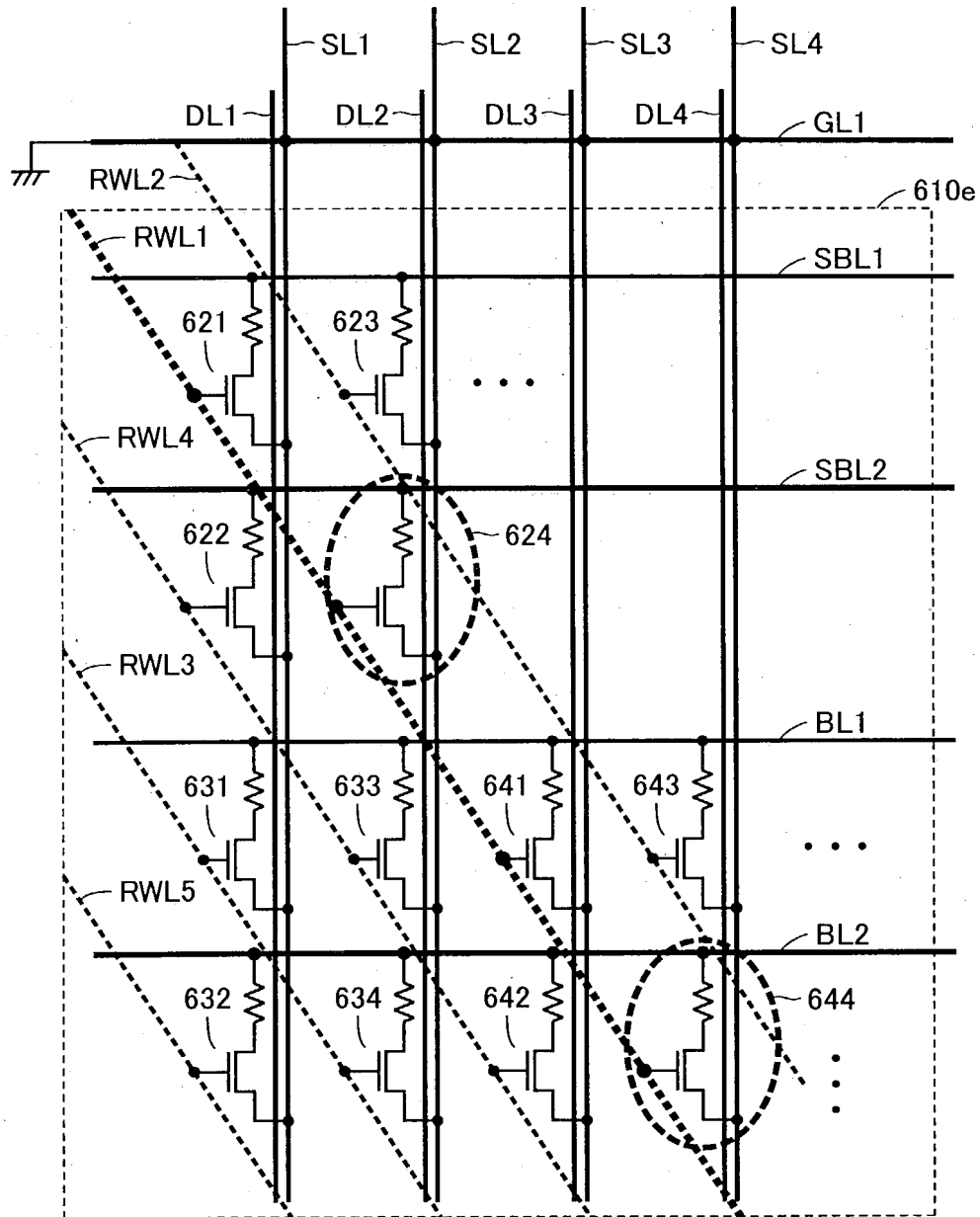


FIG.28

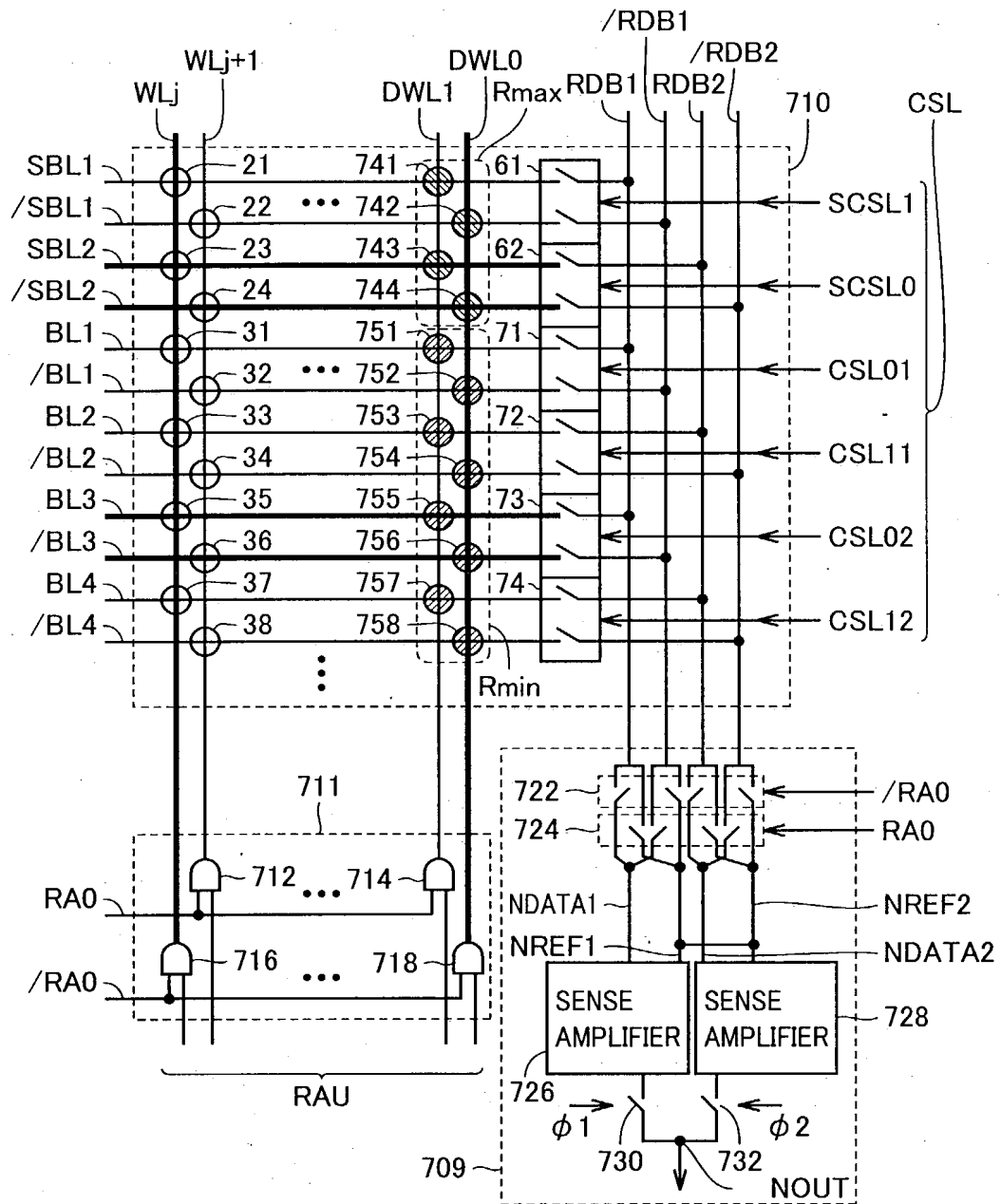


FIG.29

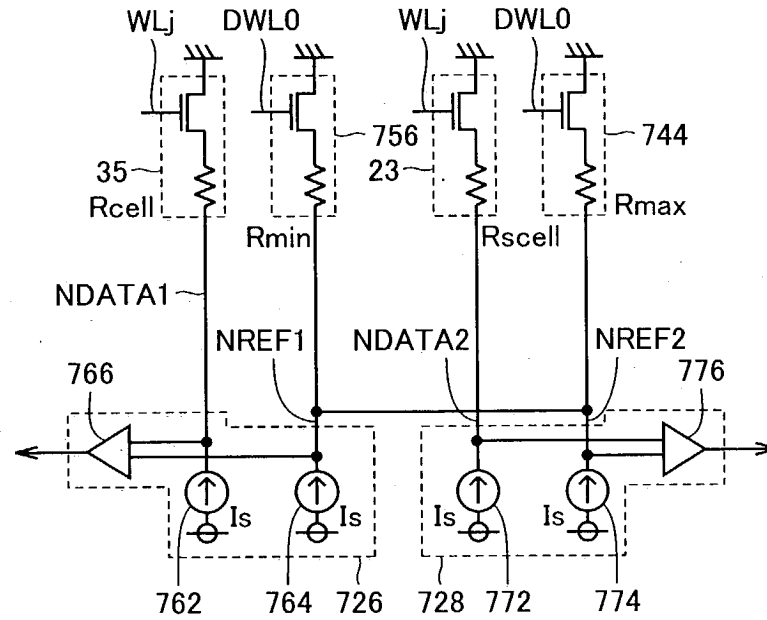


FIG.30

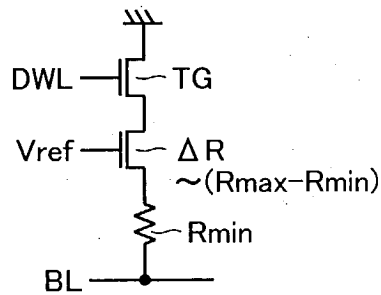


FIG.31

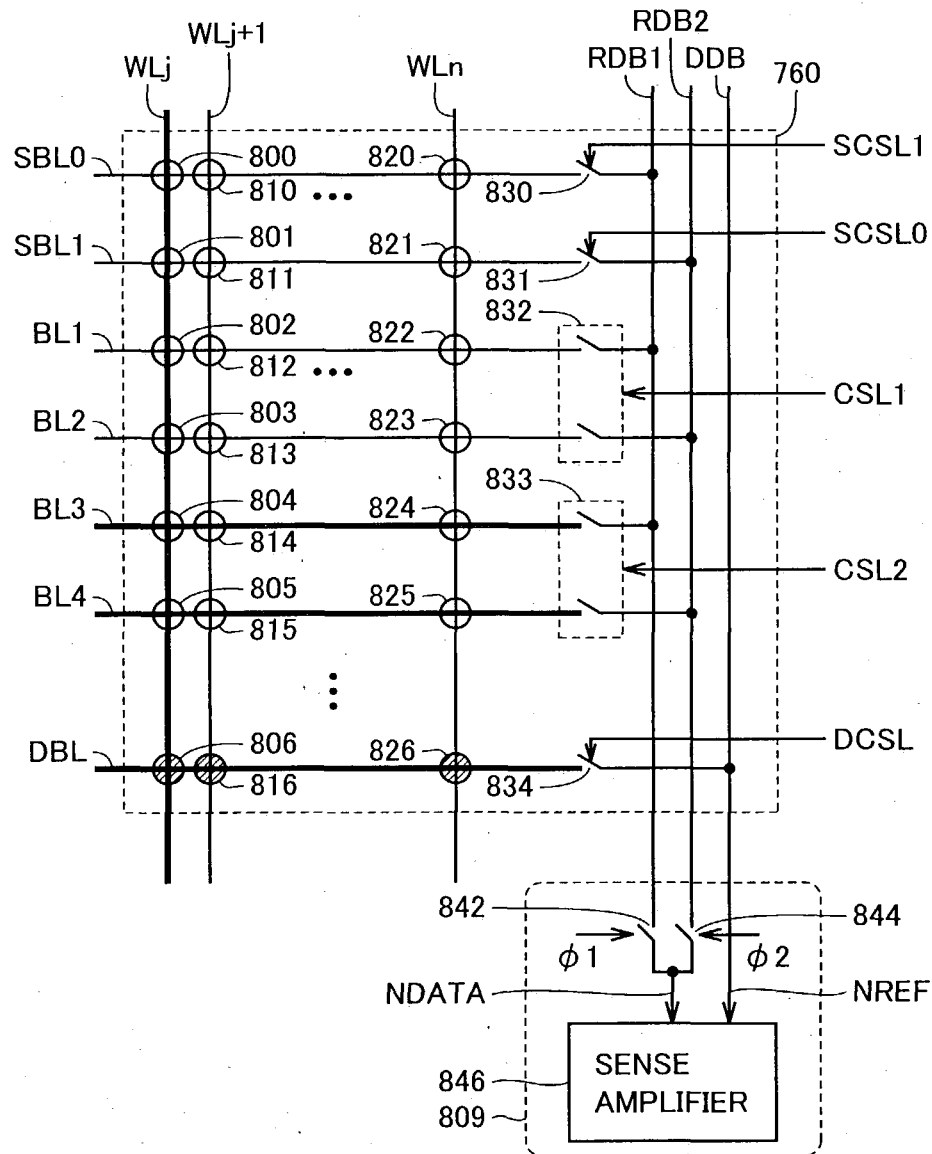


FIG.32

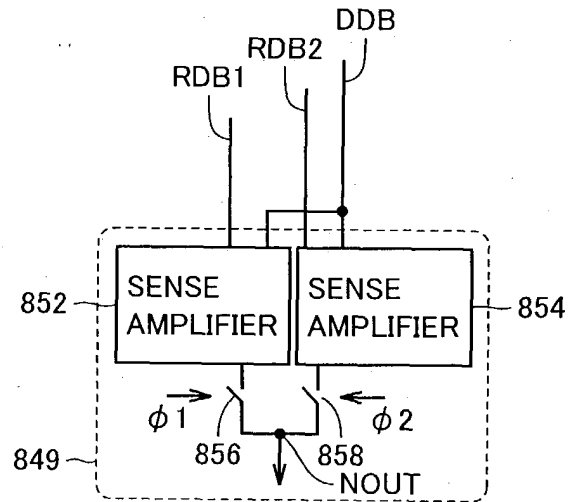


FIG.33

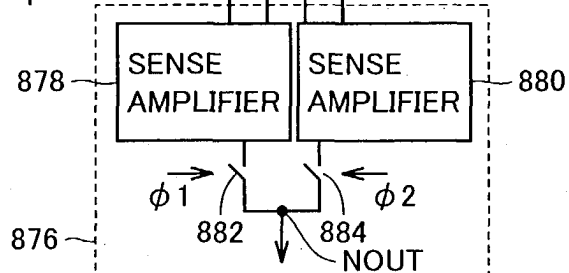


FIG.34

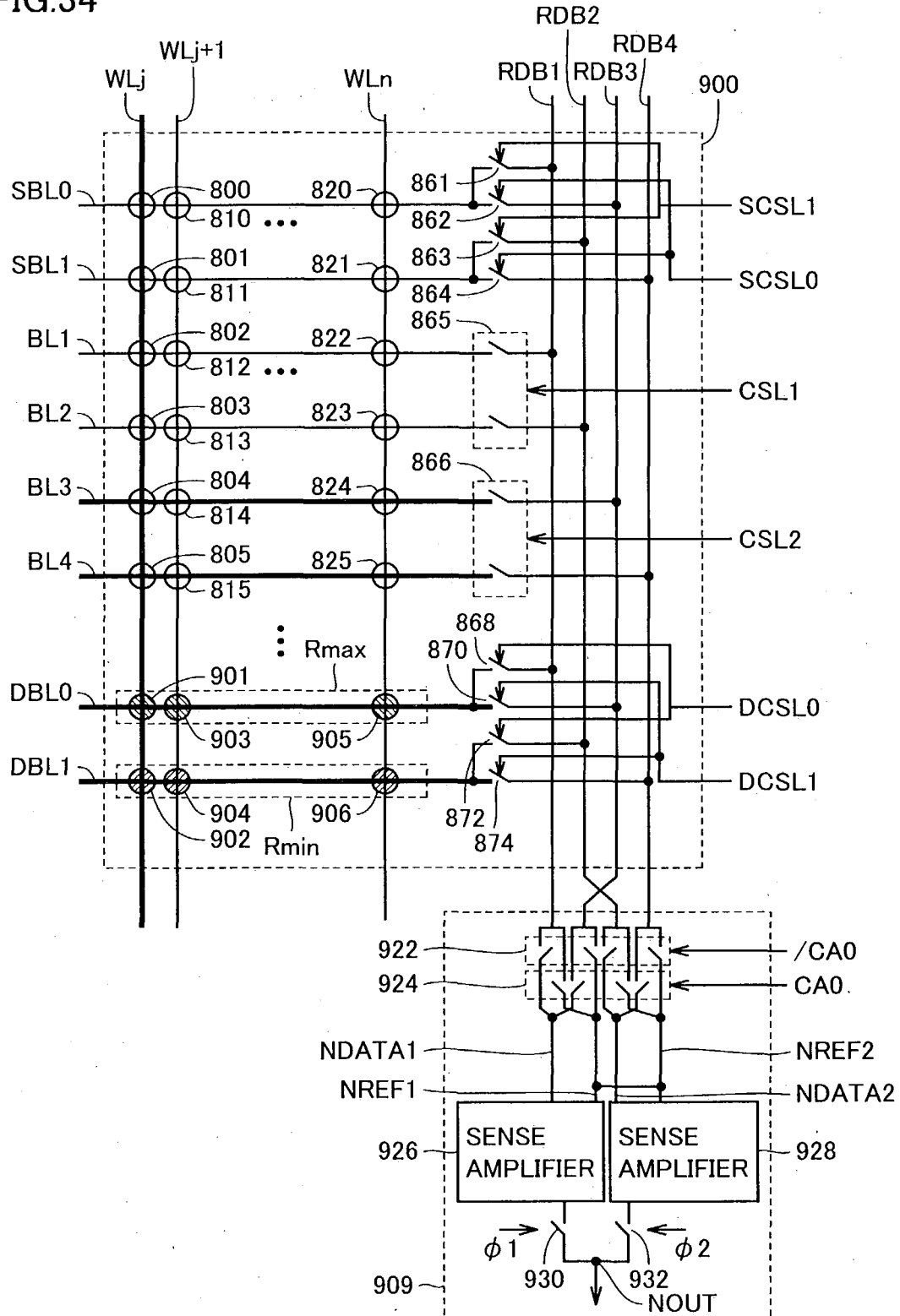


FIG.35

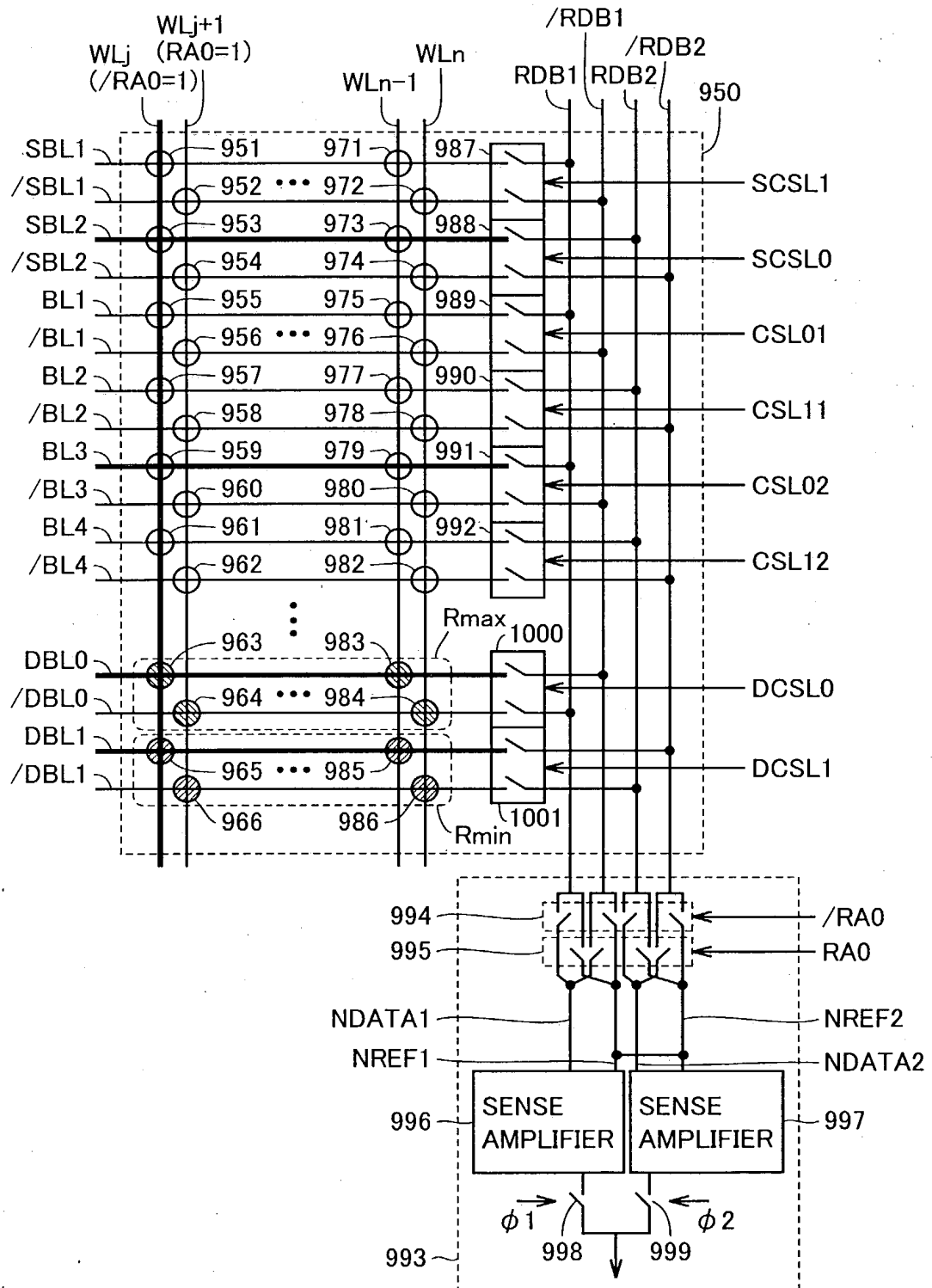


FIG.36 PRIOR ART

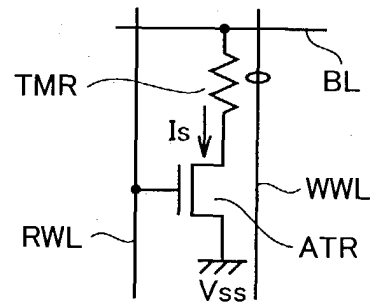


FIG.37 PRIOR ART

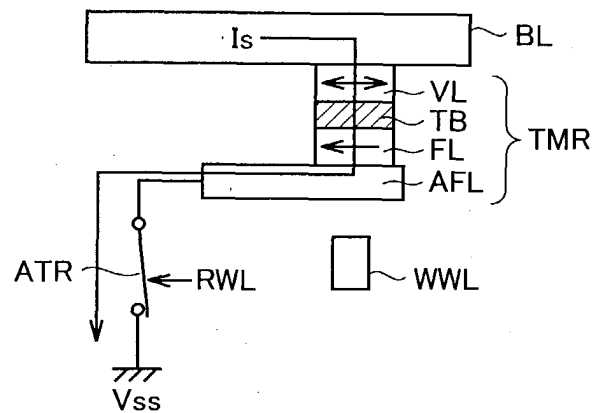


FIG.38 PRIOR ART

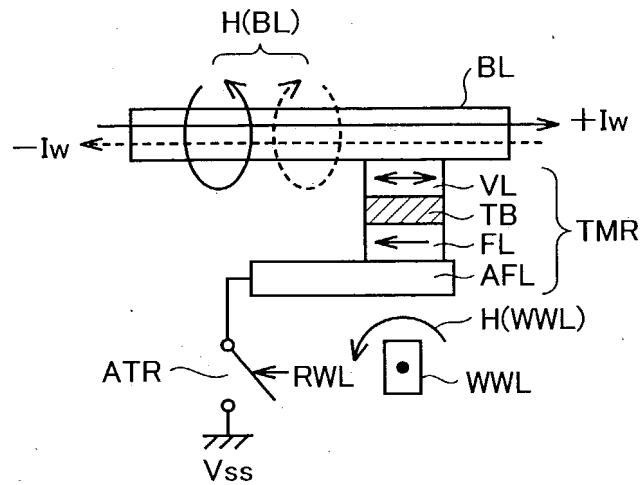


FIG.39 PRIOR ART

